Europe.
Results: Out of 11195 consecutive PCI pts 6611 (59%) underwent PCI for ACS. In this subgroup 1564/6611 (24%) were diabetics.

	Diabetics n = 1564	Non-Diabetics n = 5047	p-value
Age [years]	64	69	<0.001
Male Gender	65.4 %	77.7 %	<0.001
Prior MI	26.5 %	21.2 %	<0.001
Prior Stroke	5.9 %	3.2 %	<0.001
Renal Failure	5.6 %	2.6 %	<0.001
Cardiogenic Shock	3.8 %	2.2 %	<0.001
Heart Failure	4.0 %	2.3 %	<0.001
3-Vessel-Disease	28.3 %	20.8 %	<0.001
GP IIb/IIIa receptor blocker	45.9 %	47.0%	ns
Reason for GP IIb/IIIa			
ACS	61.2 %	65.6 %	<0.001
Pt considered high risk	16.5 %	11.2 %	<0.001
30-Day-Mortality	3.7 %	2.3 %	<0.001

Independent determinants for the use of GP IIb/IIIa during PCI for ACS were male gender (OR 1.30, 1.16-1.45) and cardiogenic shock (OR 1.69, 1.24-2.30). Determinants against GP IIb/IIIa were age >70 years (OR 0.64, 0.58-0.71), prior MI (OR 0.68, 0.68-0.77) and prior CABG (OR 0.69, 0.58-0.82). Known diabetes did not influence the decision for the use of GP IIb/IIIa (OR 0.96, 0.86-1.07).
Conclusion: Less than half of diabetic pts undergoing PCI for ACS in Europe received GP IIb/IIIa during PCI. Despite the evidence of an improved outcome in especially diabetics, the frequency of GP IIb/IIIa use during PCI for ACS was not different from that in non-diabetics in clinical practice. In a multivariate analysis diabetes mellitus was no determinant for the use of GP IIb/IIIa for ACS in Europe.

ORAL CONTRIBUTIONS

829FO

Featured Oral Session...Embolic Protection and Microvascular Perfusion in Acute Myocardial Infarction Intervention

Monday, March 08, 2004, 4:00 p.m.-5:30 p.m.
Morial Convention Center, Room 257

4:15 p.m.

829-2 Frequency and Evolution of Microvascular Obstruction Early After Interventional Therapy of Acute Myocardial Infarction

Gilbert L. Raff, Ralph E. Gentry, James A. Goldstein, William Beaumont Hospital, Royal Oak, MI

Background
Microvascular obstruction (MO), a predictor of adverse clinical outcomes after acute myocardial infarction (AMI), has been reported in 25-65% of patients examined 4-10 days after AMI. Contrast-enhanced cine magnetic resonance imaging can sensitively detect MO. The present study was designed to determine the frequency of MO within 24 hours after primary percutaneous intervention therapy (PCI) of AMI, and its evolution over time.
Methods
We imaged 43 patients within 24 hours after PCI, and did repeat CEC after one week in 25 and after three months in 43. All patients had TIMI 3 flow on angiography. Approximately one minute after 0.20mmol/kg of I.V. gadolinium-DTPA contrast, nine 8mm short axis and two long-axis images were obtained, using an EKG-gated, segmented k-space true-FISP cine pulse sequence. At approximately 10 minutes, after scanning inversion time to optimally null myocardium, an inversion-recovery turbo-FLASH delayed enhancement study was done in the same slices. MO defects were identified as discrete regions of endocardially-based hypoenhancement. These were measured by planimetry as a percent of total infarct area, and classified as mild (1-10%), moderate (11-20) and severe (>20%). Analysis was done by two blinded observers, with planimetered areas averaged between the two.
Results
Studies performed within 24 hours of infarct intervention documented MO in 37/43 (86%) patients. Among patients with large defects, mean size was 32.1% of total infarct area. Later follow-up studies (performed 7 +/-5 days post-AMI) showed decrease in average MO size to 18.2% (P=0.002). At three months, MO was visible in only 4/43 (9%) of patients.
Conclusions
Microvascular obstruction is more common than previously reported early after successful PCI therapy of AMI, and its presence decreases with time. Rapid diagnosis of MO by contrast-enhanced cine MRI may be of value in the development of novel therapies for no-reflow.

4:30 p.m.

829-3 Early Results From the Japanese Asparagus Trial

Toshiya Muramatsu, S. Suwa, S. Koyama, N. Fujita, M. Saito, H. Kamiya, A. Oida, T. Tsuchiya, Y. Horit, Kawasaki Social Insurance Hospital, Kawasaki, Japan

Background:
Distal embolization may result in slow flow, no re-flow and reduced myocardial perfusion, increasing the risk of non-Q-wave MI & death. Embolic Protection devices may protect the micro-vasculature from thrombo-emboli improving short and long-term clinical outcomes. We designed the ASPARAGUS Trial, ASPirAtion of LibeRated Debris in Acute MI with GUardwire System, a multicenter , Prospective, Randomized trial using the PercuSurge GuardWire® System in the treatment of acute MI.a To assess the safety and effectiveness of adjunctive Embolic Protection in patients with an acute MI.
Methods:
ASPARAGUS is 26 institutes, prospective, randomized trial enrolling up to 300 randomized patients. Patients experiencing AMI consented within 12 hours of symptom onset who are likely to be treated with Stenting and who meet entry criteria are eligible for randomization. To compare to intervention with/without protection will result in faster and more complete ST-segment resolution, smaller infarct size, and improved myocardial perfusion.
Results:
336 patients were enrolled then 230 patient were observed as an early clinical result. Including 80 Angiographic data (post procedure TIMI flow, Myocardial blush, Corrected TIMI frame count) and 180 ECG data. (the magnitude of ST segment resolution at 90 and 180 mins after procedure) were analyzed by core- laboratory.

Procedural and hospital outcomes are summarized in the Table.

Control GuardWire use
Device success 99 .2% (137/138)
Distal Embolization 4.4% (5/114) 2.4% (3/125)
Death 7.9% (9/114) 5% (6/125)
Non–Q-wave MI 0.9% (1/114) 0.8% (1/125)

Conclusion:
This early results from an ongoing multicenter trial suggests that the GuardWire is safe and effective in reducing athero-embolism during percutaneous coronary intervention of acute MI. Completed angiographic and clinical follow-up will be presented.

4:45 p.m.

829-4 Dose Thrombus Aspiration With Distal Protection Using PercuSurge™ Before Stenting for Acute Myocardial Infarction Reduce No-Reflow Phenomenon?

Yoshiaki Ito, Toshiya Muramatsu, Reiko Tsukahara, Keisuke Hirano, Shigeru Nishimura, Kawasaki Social Insurance Hospital, Kawasaki, Japan

Background: No-reflow phenomenon is a problematic complication in reperfusion therapy for AMI. Main cause of the no-reflow is a embolism of the thrombus or plaque components.We examined the thrombus aspiration with distal protection using PercuSurgeTM during percutaneous coronary intervention for AMI reduce the risk of no-reflow.
Subjects and Methods: Serial 522 patients with AMI onset from 24 hours were examined. These patients spirit into the three groups;stenting without aspiration groups(S-group,n=305),stenting with aspiration only using RescueTM groups(R-group.n=140),stenting with aspiration with distal protection using PercuSurgeTM groups(P-group,n=77). TIMI III flow grade after PCI, TIMI frame count(TFC) after PCI, frequency of no-reflow, cahanges of left ventricular ejection fraction(LVEF) in immediately after PCI and pre discharge(average 11 days) and major adverse cardiac events(MACE) durling hospitalization were evaluated.
Results: There were no differences in terms of patient age, risk factors, reperfusion time from onset, or target vessel diameter or size of stent used. TIMI III flow grade after PCI were significant higher in P-group. TFC after PCI were significant lower in P-group(18.3±8.4,22.4±13.4,26.4±18.5,p<0.05). Frequency of no-reflow were significant lower in P-group(1.3%,10%,14.1%respectively).LVEF immediately after PCI were no significant different in 3groups,but LVEF at pre discharge were significantly higher in P-group(62±9,56±13,54±14% respectively). MACE were no significant difference between groups but pump failure trended to lower in P-group.**Conclusion:** Our results suggest that using the PercuSurge as a reperfusion therapy for AMI reduce no-reflow phenomenon and maintain of the LVEF during acute phase hospitalization.

5:00 p.m.

829-5 Primary Angioplasty in Acute Myocardial Infarction With Distal Protection of the Microcirculation: Principal Results From the Prospective, Randomized EMERALD Trial

Gregg W. Stone, John Webb, David A. Cox, Bruce R. Brodie, Mansoor Qureshi, Daniel Dulas, Anna Kalynych, Mark Turco, Heinz P. Schultheiss, Barry Rutherford, Mitch Kruckoff, Raymond Gibbons, Alexandra J. Lansky, Ramona Pop, Roxana Mehran, Denise Jones, Cardiovascular Research Foundation, New York, NY, Lenox Hill Heart and Vascular Institute, New York, NY

Background. Distal embolization during primary percutaneous coronary intervention (PCI) for AMI is common, and may result in diminished myocardial perfusion, incomplete ST segment resolution (STR), impaired myocardial recovery and increased mortality.